Pipeline to Success

in Agriculture, Watershed & Natural Resource Sciences

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CSREES/USDA Targeted Mission Areas

1. Enhance economic opportunities for agriculture producers.
2. Support increased economic opportunities and improved quality of life in rural America.
3. Enhance protection and safety of the nation's agriculture and food supply.
4. Improve the nation's nutrition and health.
5. Protect and enhance the nation's natural resource base and environment.

USDA Collaborators

- USDA Agricultural Research Service
- Natural Resources Conservation Service
- Resource Conservation District of Monterey County
- Recruitment in Science Education
- Agriculture and Land-Based Training Association
- Community Alliance for Family Farmers
- Serendipity Farms
- City of Salinas
- Moss Landing Marine Labs
- Monterey County Farm to School Partnership
- Watershed Institute
- Everyone's Harvest
- Central Coast Watershed Studies
- Elkhorn Slough National Estuarine Research Reserve
- Monterey Bay Analytical Services
- RBF Consulting
- Camp SEA Lab
- Monterey Abalone Company
- California State Parks
- National Marine Fisheries Service
- Ventana Wildlife Society

Program Objectives

1. Provide student field-based watershed and agriculture curriculum to **110** Hispanic students from local area high schools.
2. Provide four (serving up to **80** participants) high school student/parent field-based, career enrichment agriculture, and watershed field trips.
3. Provide student/parent CSUMB Science Days.

Program Objectives

4. Provide **55** RISE high school seniors with job shadow experiences with community partners.
5. Provide retention and transfer bridge activities.
6. Create and deliver a Science Leadership Program to **36** science majors.
7. Form community Advisory Committee to provide industry/agency perspective on the skill sets valued by graduate schools and professional work force.

Program Objectives

8. Provide students with **32** paid internships at local and regional agriculture, watershed, and natural resource organizations.
9. Provide opportunities for **six** CSUMB students to complete their senior thesis project.
10. Develop a web site that serves as a curricula and programmatic model for other HSI's.
11. Provide funding for, **up to 2**, "pipeline" students to attend graduate school in USDA related priority areas.

RISE Recruitment & Retention

- High school student/parent field-based field trips
- Career enrichment agriculture and watershed field trips
- Student/parent CSUMB Science Day
- Job Shadowing



Community College Recruitment & Retention

- Transfer activities
- Career workshops
- Student and faculty exchange visits
- Course articulations

CSUMB Experiential Learning

- Science Leadership Program
- Community Advisory Committee
- Paid internship opportunities
- Research experiences
- Web site development

Program Beneficiaries

- High school students
- Cabrillo Community College students
- Hartnell Community College students
- CSUMB students
- USDA Collaborators

Program Evaluation

- Literature review of "pipeline" concepts to determine best ways to support students transitioning through process.
- Interviews of students to determine key ingredients needed for "pipeline".
- Interviews of entry-level students, conducted by student evaluators.
- Annual surveys of project collaborators to access "pipeline" success.
- Development and implementation of a cross-institutional monitoring system to track students through "pipeline".

Program Impacts

- Student success through "pipeline" from high school through community college/university to graduate school including:
  - Increased knowledge, skills, and interest in natural resources science, associated careers, and higher education requirements by students and parents.
  - Increased transfer rates from high school and community college students into four-year universities.
  - Increased motivation of students to successfully complete their undergraduate science degree.
  - Development of curricula that is aligned with skill sets valued by graduate schools and professional work force.
  - Increased knowledge of the skills and education needed to perform natural resource-related jobs.